Manufacturing and Supply Chain and Asset Management in SAP S/4HANA Cloud 2002 Release Update

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SAP S/4HANA Release Strategy
(2019–2021 and definition of deliveries)

Yearly innovation cycle with quarterly SP stacks

Today

SAP Note 2868297 - Release Information Note for SAP S/4HANA Cloud 2002
SAP Note 2868331 - Release Restriction Note for SAP S/4HANA Cloud 2002
Agenda

Manufacturing & Supply Chain & Asset Management in SAP S/4HANA Cloud 2002

- Warehouse Management
  - Lean integration between production and warehouse managed on bin level
  - Serial Number Handling in Warehouse Management
  - Attachment Services in Warehouse Management
  - Reduce manual efforts by running warehouse task creation in the background

- Inventory Management - Cycle counting as part of the physical inventory process

- Quality Management
  - Resolve internal problems by using the 8D methodology
  - Inspection results recording for serialized materials

- Production planning and execution
  - Predictive material and resource planning (pMRP)
  - Schedule Production
  - Manage Work Center Capacity
  - Reprocess failed material movements

- Resource Scheduling for Maintenance Planners
Key Innovations in S/4HANA Manufacturing & Supply Chain

**aATP**
- Customer segmentation
- Automated mass order processing using alternative variants
- Manage shortages along with business priorities
- Improve business rules
- Fast re-plan
- Plant and Material Substitution

**DDMRP**
- Overcome increasing volatility in demand and shorten lead-time
- Keep inventory at the most optimum amount to deal with variation at minimum cost across the chain
- Driving replenishment on actual demand, not forecasts. The best use of assets is to make what is needed and what sells.
- Propose decoupling points and buffer levels

**pMRP**
- Simulate future scenarios for the plant to predict capacity and component demand

**Inventory Management**
- Predict arrival and manage delivery delays for Stock in Transit
- Pre-built set of Inventory KPIs for analytics with drill down functionality
- Early detection of slow or non-moving stock

**Quality Management**
- Defect code proposal based on problem description
- Closed Loop Inspection Planning using Failure Mode and Effect Analysis
Release Highlights

Warehouse Management
SAP S/4HANA Cloud - Warehousing

Since 1708

Inventory Management

Third-Party Warehouse Management System

Since 1805

Since 1811

Warehouse Management

SAP EWM 9.5
SAP S/4HANA Cloud - Warehouse Management
Scope in SAP S/4HANA Cloud 2002 Release

Inbound Processing
✓ From Supplier (with Quality Inspection)
✓ From Customer Returns (via other storage loc.)
✓ From other Storage Location
  ✓ From other DC / Plant
✓ From Production (with Quality Inspection)
✓ From Repetitive Manufacturing

Internal Processes
✓ Physical Inventory / Cycle Counting
  ✓ Internal Repacking
  ✓ Posting Changes
  ✓ Internal Movements
  ✓ Resource Management
  ✓ Replenishment

Outbound Processing
✓ To Customer
✓ Return to Supplier
✓ Ad hoc Goods Issue
✓ To other Storage Location
  ✓ To other DC / Plant
✓ To Production (Staging)
  ✓ Kanban Supply

Batch Managed Products / Serial Numbers / Handling Units

Best Practice Processes
12

Warehouse Structure
6+4

Mass Data Migration
5

Self-Service Configuration UIs
19

Roles/ Catalogs/Tiles
2 / 12 / 39

APIs
5

Output Management
7
SAP S/4HANA Cloud - Warehouse Management

Innovation in 2019

Available 1902

- Quality Inspection
  Inbound Processing with Quality Management
- Cycle Counting
  New Physical Inventory method
- General Storage
  New Storage Type Template
- Migration of Fixed Bin Assignments
  New Migration Object

Available 1905

- Resource Management
  APIs for Mobile Warehouse Tasks Execution
- Kanban Supply to Production
- Process Warehouse Tasks - Picking
  Fiori App
- Harmonized Control Cycle
- Enterprise Search
  Storage Bins and Warehouse Products

1811 Initial Cloud Release

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SAP S/4HANA Cloud - Warehouse Management

Innovation in 2019

Available 1908

- Goods Receipt from Repetitive Manufacturing
- Warehouse Analytics: Warehouse Tasks and Outbound Delivery Orders
- Process Warehouse Tasks – Putaway: Fiori App

Available 1911

- Replenishment: Planned Replenishment of Fixed Bins
- Enhancements to KANBAN Processing: Reversal and Quantity Differences
- Partial Save
- Support of further process Variants (e.g. configurable Material)
- API – Read Handling Units
- API – Read Outbound Delivery Order
- Access/Scanning Codes for Packing

Enhancements to Physical Inventory

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SAP S/4HANA Cloud - Warehouse Management

Innovation in 2020

Available 2002

- Bin Managed Production Stock & Synchronous Postings
- Attachment Services for WM Objects
- Automation of pick task creation
- API for Inventory Counting
- Serial Numbers On Document Level
- Harmonization of Handling Units
  - Unified HU Numbering
  - Forward WM HU to Sales & Distribution
- Enhanced API for Deliveries (WM)
  - Update of Delivery
- Analytics for Inbound Deliveries

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### SAP S/4HANA Cloud - Warehouse Management

Best Practice Processes

<table>
<thead>
<tr>
<th>ID</th>
<th>Scope Item Title</th>
<th>Initial Release</th>
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<td>3BR</td>
<td>Warehouse Inbound Processing</td>
<td>SAP S/4HANA Cloud 1811</td>
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<tr>
<td>3BS</td>
<td>Warehouse Outbound Processing</td>
<td>SAP S/4HANA Cloud 1811</td>
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<tr>
<td>3BX</td>
<td>Warehouse Physical Inventory</td>
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<td>Warehouse Production Integration</td>
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<td>3BT</td>
<td>Warehouse Ad Hoc Goods Issue</td>
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<td>Warehouse Posting Changes</td>
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<td>Warehouse Internal Repacking</td>
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<td>3M0</td>
<td>Quality Management in Warehousing</td>
<td>SAP S/4HANA Cloud 1902</td>
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<td>3VT</td>
<td>Warehouse Kanban Supply into Production</td>
<td>SAP S/4HANA Cloud 1905</td>
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<td>Resource Management in Warehousing</td>
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<td>41U</td>
<td>Warehouse Goods Receipt from Repetitive Manuf.</td>
<td>SAP S/4HANA Cloud 1908</td>
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<td>4A2</td>
<td>Replenishment in Warehousing</td>
<td>SAP S/4HANA Cloud 1911</td>
</tr>
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Lean integration between production and warehouse managed on bin level

- Lean integration between production and warehouse managed on bin level
- Increase of stock transparency as stock in production is managed on a more-granular level
- Warehouse Management (WM) managed production supply area (PSA)
Lean integration between production and warehouse managed on bin level

- The goods receipt can be posted directly and synchronously (without inbound delivery) in the warehouse.
- Components can be consumed directly from the warehouse (without goods issue posting for the outbound delivery).
Serial Number Handling in Warehouse Management

- Improve serial number capabilities for cloud warehouse management
- Visibility: See which customers received which serial numbers
- Integration: Handle serialized products in receiving and shipping processes
- Efficiency: Only enter serial numbers when they arrive at or leave the warehouse
Attachment services in Warehouse Management

- Enable connection of all kinds of media to business documents as additional information
- Improve traceability as related documents from externals can be attached to cloud business objects in warehouse management
- Create, read, update or delete attachments using the SAP Fiori apps
  - Change Inbound Deliveries
  - Run Outbound Process
Reduce manual efforts by running warehouse task creation in the background

- Reduced manual effort by running warehouse task creation in the background
- Create pick warehouse tasks automatically in the background with defined time intervals
- Creation of single run or recurring background warehouse task creation jobs
Warehouse Management: Further innovations

- **Improve warehouse analytics for inbound delivery**
  The new CDS view enables you to view some aggregated data relevant to inbound delivery items. For example, the following data is available:
  - The number of inbound delivery items in your warehouse
  - The number of inbound delivery items that are blocked
  - The average goods receipt time of your inbound delivery items

- **Enhanced automation with automatic replenishment strategy**
  With this feature, you can enable the system to automatically create a replenishment warehouse task in the background to ensure that there is enough stock available for picking activities.

- **Enhanced extensibility with an API for physical inventory**
  With this service Warehouse Physical Inventory (A2X) (API_WHSE_PHYSINVENTORYITEM), you can count physical inventory (PI) in your warehouse. You can retrieve, count, and change PI items. You can also mark PI items as Deleted.
SAP S/4HANA Cloud - Warehouse Management

Overview of APIs in the Warehouse Management area

SAP S/4HANA Cloud – Warehouse Management

- Process Warehouse Tasks
  - Create
  - Read
  - Update
  - Delete

- Warehouse Resource
  - Read
  - Update

- Warehouse Outbound Delivery Order
  - Read
  - Update

- Handling Unit
  - Read

- Physical Inventory Counting
  - Read
  - Update

Mobile Device / App

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Release Highlights
Inventory Management
Inventory Management: Cycle counting as part of the physical inventory process

- Improve operational efficiency by classifying materials for cycle counting as part of the physical inventory process
- Increase inventory accuracy; for instance, because fast movers can be counted more often
- Manage classifications for materials in stock based on the cycle-counting settings maintained in the self-service configuration UI “Cycle Counting”
Release Highlights

Quality Management
Quality Management: Resolve internal problems by using the 8D methodology

- Consistent and standardized handling of problems by using the 8D methodology and its predefined process steps
- Achieve transparency on all processes related to the issue
- Identify, correct, and eliminate recurring problems
- Create the problem-solving process with reference to a defect
Quality Management: Inspection results recording for serialized materials

- Record the results for characteristics flexibly and effectively in inspection lots for both serialized and non-serialized materials.
- Results recording for characteristics with single results in an inspection lot with a serialized material is done on the result details page.
Release Highlights

Production Planning and Execution
SAP Fiori app to reprocess failed material movements

- List of unsuccessful materials movements along with the related error messages
- Identify why the material movements failed
- Replace the storage location, batch, posting date
- Reprocess failed material movements
Enhancements for predictive material and resource planning (pMRP)
Manage component forecasts for suppliers

- The **Simulation Components** view lists all material components of a simulation
- Switch between the **Materials** and the **Supply** perspectives
- Review **Planned component consumption** based on simulated changes
- Export to **Excel** to share forecast with stakeholders
Enhancements for predictive material and resource planning (pMRP)
Aggregated capacity plan for work center groups

- Choose to **group** the capacity plan
- Review the **aggregated** remaining capacity
Choose PIR version to decide if they are considered for operative MRP

Enhancements for predictive material and resource planning (pMRP)
Transfer Component Forecast (PIRs) for subassembly planning
Enhancements for Schedule Production

New Filters: Setup Group Key and Category
Enhancements for Schedule Production

Setup Group Information
Enhancements for Schedule Production

Insert Operation
Enhancements for Schedule Production
Advanced Variant Configuration (AVC) integration
Enhancement for Manage Work Center Capacity

New Filter for Work Center Group + Reschedule Button

![Image of SAP Manage Work Center Capacity interface with Enhanced Filter for Work Center Group and Reschedule Button]
Enhancement for Monitor Work Center Schedules
Non working time
Enhancement for Monitor Work Center Schedules
Process Industry – Operation Detail
Production Execution: Integration

- **SOAP API** *Manufacturing Order – Send* enhanced to handle characteristics, long texts, operation status, additional fields like `MaterialsCoProduct`, `DebitCreditCode`, `InventorySpecialStockType`

- **ODATA API** *Production Order (Version 2)*
  This API is the successor of the deprecated API *Production Order (Deprecated)*. Note: Some improvements in version 2 are incompatible changes compared to version 1.

  - OData service based Read API for *Master Recipe*
  - OData service based Read API for *Production Routing*
Release Highlights
Asset Management
SAP S/4HANA Cloud for Asset Management
Resource Scheduling for Maintenance Planners

- New SAP Best Practices scope item 43R
- Added value to Asset Management
- Maintenance Scheduling
- Simulations and Versioning
- Collaboration
Resource Scheduling for Maintenance Planners

- Overview of important KPIs like due maintenance orders, schedules and work center utilization in real time at a glance
- Monitor important KPIs for your work centers
- Navigation into transactional data
Manage Work Center Utilization

- Analyze and manage the utilization of your work centers
- Visualize utilization based on various attributes, such as work center, processing status, priority, or order type
- Navigate to orders, technical objects, and functional location data
- Dispatch order operations
Schedule Maintenance Order Operations

- Set up schedules for the maintenance order operations
- Monitor and review schedule execution
- Level work center utilization
- Use a graphical view to identify scheduling conflicts
Maintenance Scheduling Board

- Visualize on a timeline the maintenance orders, order operations, and suboperations in your work centers via Gantt chart
- View relationships between order operations and relationship violations
- Dispatch order operations and suboperations
- Navigate to orders, equipment, and functional location
Assign Maintenance Order Operations

- Manage the personal responsibility of maintenance order operation
- Assign maintenance order operations to a person responsible
- Change or delete assignments
SAP S/4HANA Cloud 2002

Localization

43 Countries **

Australia, Austria, Belgium, Brazil, Canada, China, Czechia, Denmark, Finland, France, Germany, Hong Kong, Hungary, India, Indonesia, Ireland, Italy, Japan, Luxembourg, Malaysia, Mexico (partial scope), Netherlands, New Zealand, Norway, Philippines, Poland, Portugal Romania, Russia, Saudi Arabia, Singapore, Slovakia**, South Africa, Spain, South Korea, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, United Kingdom, United States

25 languages

Arabic, Chinese (simplified), Chinese (traditional), Czech, Danish, Dutch, English, Finnish, French, German, Hungarian, Italian, Japanese, Korean, Malay, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Slovak, Swedish, Thai, Turkish

** Localized country versions might not include all available solution scope. Please select your country version in the SAP Best Practices Explorer to see the available solution scope for a specific country. For localization specific features please see the SAP Help Portal for SAP S/4HANA Cloud and navigate to Product Assistance and Country-Specific Functions.

More Information available on Country Versions: Release Information & Restriction Note: 2785449
Preparing for 2002: Next Steps

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- View [upgrade schedule for SAP S/4HANA Cloud](#)
- View [SAP service level agreement](#)
- Read about [upgrade specific frequently asked questions](#)
Where to go for more information?

Learn

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- **Learning Room**
- **Stay Current Program**

Engage

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- **SAP Help Portal**
- **Join the SAP S/4HANA Movement**
- **New Podcast**
  “Inside SAP S/4HANA”

Implement

- **Best Practices Explorer**
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- **SAP Transformation Navigator**
- **Roadmap Viewer**
- **SAP S/4HANA Cloud Trial**

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Thank you.

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